AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (canceled)

4. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said apparatus comprising:

a first variable wavelength light source for generating a first variable wavelength light;

a first light modulating element for introducing into said first optical transmission line a first incident light obtained by modulating said first variable wavelength light with a frequency of a first electrical signal, wherein said first incident light exits from said first optical transmission line as a first outgoing light;

a first optical/electrical converting element for converting, by a first optical/electrical conversion process, the first outgoing light into a second electrical signal;

a second variable wavelength light source for generating a second variable wavelength light;

a signal source for generating a reference electrical signal;

a second light modulating element for introducing into the second optical transmission line a second incident light obtained by modulating said second variable wavelength light with said reference electrical signal, wherein said second incident light exits from said second optical transmission line as a second outgoing light;

a second optical/electrical converting element for converting, by a second optical/electrical

conversion process, the second outgoing light into the first electrical signal and for outputting the first electrical signal into said first light modulating element; and

~~The optical characteristic measuring apparatus according to claim 3, further comprising~~ a third optical/electrical converting element for converting, by a third optical/electrical conversion process, a reflected light, which is generated when said second light modulating element introduces said second incident light into said second optical transmission line, into a third electrical signal.

5. **(currently amended)** The optical characteristic measuring apparatus according to claim [[3]] 4, further comprising:

a phase comparing element for measuring a phase difference between a phase of the second electrical signal output by said first optical/electrical converting element and a phase of said reference electrical signal; and

a characteristic computing element for computing a group delay characteristic or a dispersion characteristic of the devices under test by using said phase difference.

6. (previously presented) The optical characteristic measuring apparatus according to claim 4, further comprising:

a phase comparing element for measuring a phase difference between a phase of the third electrical signal output by said third optical/electrical converting element and a phase of said reference electrical signal; and

a characteristic computing element for computing a group delay characteristic or a dispersion characteristic of the devices under test by using said phase difference.

7-11. (canceled)

12. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only

in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said apparatus comprising:

an optical/electrical converting element for converting, by an optical/electrical conversion process, an outgoing light, which has penetrated and exits from said first optical transmission line, into an electrical signal;

a variable wavelength light source for generating a variable wavelength light;

a signal source for generating a reference electrical signal; [[and]]

a light modulating element for introducing into said second optical transmission line an incident light obtained by modulating said variable wavelength light with said reference electrical signal; and

a further optical/electrical converting element for converting, by a further optical/electrical conversion process, a reflected light, which is generated when said light modulating element introduces said incident light into said second optical transmission line, into a further electrical signal.

13-14. (canceled)

15. **(currently amended)** An optical characteristic measuring method of measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said method comprising:

generating a first variable wavelength light;

introducing into said first optical transmission line a first incident light obtained by modulating said first variable wavelength light with a first electrical signal, wherein said first incident light exits from said first optical transmission line as a first outgoing light;

converting, by a first optical/electrical conversion process, the first outgoing light into a second electrical signal;

generating a second variable wavelength light;

generating a reference electrical signal;

introducing into the second optical transmission line a second incident light obtained by modulating said second variable wavelength light with said reference electrical signal, wherein said second incident light exits from said second optical transmission line as a second outgoing light; [[and]]

converting, by a second optical/electrical conversion process, the second outgoing light and using the converted second outgoing light as the first electrical signal in the step of modulating said first variable wavelength light to obtain the first incident light; and

converting, by a third optical/electrical conversion process, a reflected light, which is generated when said second incident light is introduced into said second optical transmission line, into a third electrical signal.

16-20. (canceled)

21. **(currently amended)** An optical characteristic measuring method of measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said method comprising:

converting, by an optical/electrical conversion process, a first outgoing light, which has penetrated and exits from said first optical transmission line, into an electrical signal;

generating a variable wavelength light;

generating a reference electrical signal;

introducing into said second optical transmission line an incident light obtained by modulating said variable wavelength light with said reference electrical signal; and

converting, by a further optical/electrical conversion process, a reflected light, which is generated when said incident light is introduced into said second optical transmission line, into a

further electrical signal.

22-23. (canceled)

24. **(currently amended)** A computer-readable medium having a program of instructions for execution by a computer to perform an optical characteristic measuring process of measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said optical characteristic measuring process comprising:

a first variable wavelength light generating processing for generating a first variable wavelength light;

a first light modulating processing for introducing into said first optical transmission line a first incident light obtained by modulating said first variable wavelength light with a first electrical signal, wherein the first incident light exits from said first optical transmission line as a first outgoing light;

a first optical/electrical converting processing for converting, by a first optical/electrical conversion process, the first outgoing light into a second electrical signal;

a second variable wavelength light generating processing for generating a second variable wavelength light;

a signal generating processing for generating a reference electrical signal;

a second light modulating processing for introducing into the second optical transmission line a second incident light obtained by modulating said second variable wavelength light with said reference electrical signal, wherein the second incident light exits from said second optical transmission line as a second outgoing light; [[and]]

a second optical/electrical converting processing for converting, by a second optical/electrical conversion process, the second outgoing light and using the converted second

outgoing light as the first electrical signal in the step of modulating said first variable wavelength light to obtain the first incident light; and

a third optical/electrical converting processing for converting, by a third optical/electrical conversion process, a reflected light, which is generated when said second incident light is introduced into said second optical transmission line, into a third electrical signal.

25-29. (canceled)

30. **(currently amended)** A computer-readable medium having a program of instructions for execution by a computer to perform an optical characteristic measuring process of measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said optical characteristic measuring process comprising:

a first optical/electrical converting processing for converting, by an optical/electrical conversion process, a first outgoing light, which has penetrated and exits from said first optical transmission line, into an electrical signal;

a second variable wavelength light generating processing for generating a variable wavelength light;

a signal generating processing for generating a reference electrical signal;

a second light modulating processing for introducing into said second optical transmission line an incident light obtained by modulating said variable wavelength light with said reference electrical signal; and

a further optical/electrical converting processing for converting, by a further optical/electrical conversion process, a reflected light, which is generated when said incident light is introduced into said second optical transmission line, into a further electrical signal.

31. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said apparatus comprising:

a first variable wavelength light source for generating a first variable wavelength light;

first light modulating means for introducing into said first optical transmission line a first incident light obtained by modulating said first variable wavelength light with a first electrical signal, wherein said first incident light exits from said first optical transmission line as a first outgoing light;

first optical/electrical converting means for converting, by a first optical/electrical conversion process, the first outgoing light into a second electrical signal;

a second variable wavelength light source for generating a second variable wavelength light;

a signal source for generating a reference electrical signal;

second light modulating means for introducing into the second optical transmission line a second incident light obtained by modulating said second variable wavelength light with said reference electrical signal, wherein said second incident light exits from said second optical transmission line as a second outgoing light; [[and]]

second optical/electrical converting means for converting, by a second optical/electrical conversion process, the second outgoing light into the first electrical signal and for outputting the first electrical signal into said first light modulating means; and

third optical/electrical converting means for converting, by a third optical/electrical conversion process, a reflected light, which is generated when said second light modulating means introduces said second incident light into said second optical transmission line, into a third electrical signal.

32. **(currently amended)** An optical characteristic measuring apparatus for measuring characteristics of devices under test having a first optical transmission line letting light through only

in a first direction and a second optical transmission line letting light through only in a second direction opposite to said first direction, said apparatus comprising:

optical/electrical converting means for converting, by an optical/electrical conversion process, an outgoing light, which has penetrated and exits from said first optical transmission line, into an electrical signal;

a variable wavelength light source for generating a variable wavelength light;

a signal source for generating a reference electrical signal; [[and]]

light modulating means for introducing into said second optical transmission line an incident light obtained by modulating said variable wavelength light with said reference electrical signal; and

further optical/electrical converting means for converting, by a further optical/electrical conversion process, a reflected light, which is generated when said light modulating means introduces said incident light into said second optical transmission line, into a further electrical signal.